

26. (New) The laminate of claim 24, wherein it exhibits a light transmittance of at least about 85%.

27. (New) The laminate of claim 24, wherein said attachable pressure sensitive adhesive layer comprises an adhesive including a cross linker solution.

Remarks

In the Office Action, claim 5 was rejected under 35 U.S.C. § 112, ¶ 2 as being indefinite. In particular, the Office Action states "[i]t is not clear whether a flexible polymeric material within the claim *** [is] a non-adhesive or an adhesive polymer." With this paper, claim 5 has been amended to recite that the "third lamina [is] comprised of optically clear flexible non-adhesive polymeric material." Accordingly, it is submitted that the § 112, ¶ 2 rejection has been overcome.

Further in the Office Action, claims 1, 3, 4, 7 and 8 were rejected under § 102(b) as being anticipated by U.S. Patent No. 4,797,317 to Oliver et al.; claim 2 was rejected under § 103 as being unpatentable over the '317 patent; claim 6 was rejected under § 103 as being unpatentable over the '317 patent in view of U.S. Patent No. 5,677,050 to Bilkadi et al.; claims 9-11 were rejected under § 103 as being unpatentable over the '317 patent in view of U.S. Patent No. 4,112,171 to Motter et al.; and claims 1-3 and 5-12 were rejected under § 103 as being unpatentable over U.S. Patent No. 4,028,475 to Willdorf in view of the '171 patent.

With this Amendment, independent claims 1 and 12 have been amended to recite "wherein once [the laminate is] attached to window glass [they provide] *** a glazing element which passes the following ANSI Z-26 test: 5.04 – Two Hour Boiling Water." Support for these amendments can be found in the specification on page 20, lines 6-11, Table 2 on page 21, and originally filed claim 7. No new matter is involved. Passage of the boiling water test is believed to be considered beneficial by original equipment manufacturers (OEM's).

It is believed that the films disclosed in the Oliver et al. and Willdorf patents, once applied to window glass, are not capable of passing the boiling water test set out in independent claims 1 and 12. Oliver et al. disclose that "[a]ny of a family of acrylic or polyester resins may

be used as mounting adhesive,” see column 5, lines 16-18 of the ‘317 patent. Willdorf similarly teaches “[t]he pressure sensitive adhesive stratum is composed of an acrylic base resin and a polyene tackifier,” see column 2, lines 29 and 30 of the ‘475 patent. However, nowhere in either the Oliver et al. patent or the Willdorf patent is it disclosed, taught or suggested that a cross linker solution is used in these adhesives. For this reason, it is believed that the Oliver et al. and Willdorf films, when joined to a vehicle window glass using the disclosed acrylic or polyester resins, will fail the boiling water test recited in independent claims 1 and 12. Neither Motter et al. nor Bilkadi et al. disclose, teach or suggest a pressure sensitive adhesive for joining a laminate to a window glass. Accordingly, it is submitted that Oliver et al., Willdorf, Motter et al. and Bilkadi et al., whether taken singly or in combination, do not disclose, teach or suggest the subject matter set out in claims 1-8 and 12.

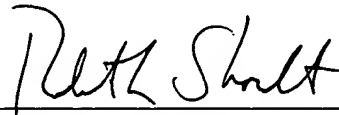
Independent claim 9 has been amended to recite “wherein said attachable pressure sensitive adhesive comprises a cross linker solution.” Support for this amendment can be found on page 14, lines 10 and 24. No new matter is involved. As noted above, neither Oliver et al. nor Willdorf disclose, teach or suggest providing a cross linker solution in the adhesives used to bond their films to window glass. Motter et al. also fails to disclose, teach or suggest this feature of the present invention. Accordingly, it is submitted that Oliver et al., Willdorf, and Motter et al., whether taken singly or in combination, do not disclose, teach or suggest the subject matter set out in claims 9-11.

With this paper, new claims 13-27 have been added. Support for the subject matter set out in claims 13 and 18 can be found in the specification on page 9, lines 29 and 30. Support for the subject matter set out in claims 14 and 27 can be found on page 14, lines 10 and 24. Support for the subject matter found in claims 15, 16, 22-26 can be found on page 7, lines 6 and 7 and in the Table 2 on page 21. Support for the subject matter set out in claims 17, 20 and 21 can be found in originally filed claim 7. Support for the subject matter set out in claim 19 can be found in the specification on page 20, lines 6-11, Table 2 on page 21, and originally filed claim 7. No new matter is involved. It is believed that claims 13-27 define patentable invention over the prior art.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

In view of the above remarks, applicant submits that claims 1-27 define patentably over the prior art. Early notification of allowable subject matter is respectfully requested.

Respectfully submitted,
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims

Claims 1, 5, 7, 9 and 12 have been amended as follows:

1. (Amended) An optically clear laminate suited for attachment to window glass to provide a glazing element which has reduced spall and lacerative consequences on impact fracture of the window glass; said laminate comprising:

(a) a first lamina comprised of optically clear flexible nonadhesive polymeric material having a first major surface and an opposite second major surface;

(b) a scratch-resistant hard coating over said first major surface to provide an exposed surface to the laminate;

(c) at least one additional lamina comprised of optically clear flexible nonadhesive polymeric material;

(d) a sufficient number of layers of in situ [underlining removed] optically clear pressure sensitive adhesive layers to directly bond said laminae together with the hard coating exposed; [and]

(e) a layer of in situ [underlining removed] optically clear ambient temperature attachable pressure sensitive adhesive to bond said laminate to window glass; and

wherein once attached to window glass provides a glazing element which passes the following ANSI Z-26 test: 5.04 – Two Hour Boiling Water.

5. (Amended) The laminate of claim 1 further including a third lamina comprised of optically clear flexible non-adhesive polymeric material.

7. (Amended) The laminate of claim 1 wherein once attached to [tempered or laminated] window glass provides a glazing element which also passes at least one of the following ANSI Z-26 tests:

[5.04 – Two Hour Boiling Water;]

5.13 – Thirty Foot Ball (9.14 m) Drop;

- 5.17 – Resistance to Abrasion;
- 5.19 – Chemical Resistance; and
- 5.23 – Flammability.

9. (Amended) An optically clear glazing element which has reduced spall and lacerative consequences on impact fracture; said glazing element comprising:

- (a) a first lamina comprised of optically clear flexible polymeric material having a first major surface and an opposite second major surface;

- (b) a scratch-resistant hard coating over said first major surface;

- (c) at least one additional lamina comprised of optically clear flexible nonadhesive polymeric material;

- (d) a sufficient number of layers of in situ [underlining removed] optically clear pressure sensitive adhesive layers to directly bond said laminae together with the hard coating exposed;

- (e) a layer of in situ [underlining removed] optically clear ambient temperature attachable pressure sensitive adhesive to bond said laminate to window glass, wherein said attachable pressure sensitive adhesive comprises a cross linker solution; and

- (f) [tempered or laminated] window glass.

12. (Amended) An optically clear laminate comprising the following components adhered together in the following order:

- (a) a scratch-resistant hard coat comprised of cured ceramer;

- (b) a first biaxially oriented polyester film having a thickness of not more than 5 mils (0.13 mm);

- (c) a first pressure sensitive adhesive layer;

- (d) a second biaxially oriented polyester film having a thickness of not more than 5 mils (0.13 mm);

- (e) a second pressure sensitive adhesive layer;

- (f) a third biaxially oriented polyester film having a thickness of not more than 5 mils (0.13 mm); [and]

(g) a third ambient-temperature-attachable pressure sensitive adhesive layer; wherein said pressure sensitive adhesive layers are comprised of pressure sensitive adhesive having a shear storage modulus measured at 22°C in the range of about 0.20 MPa to 0.50 MPa; and wherein once attached to window glass provides a glazing element which passes the following ANSI Z-26 test: 5.04 – Two Hour Boiling Water.